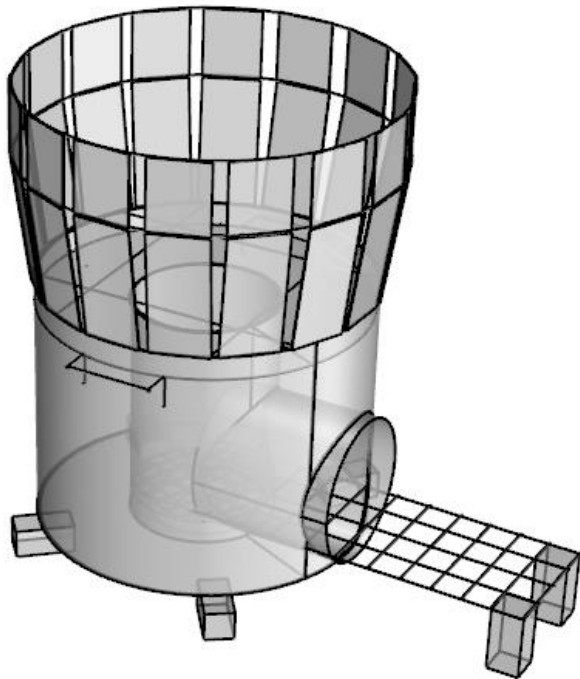


Appendix A - Building manual

INSTRUCTION MANUAL - CLEAN COOKSTOVE



KUMASI INSTITUTE OF TROPICAL AGRICULTURE

IN COLLABORATION WITH

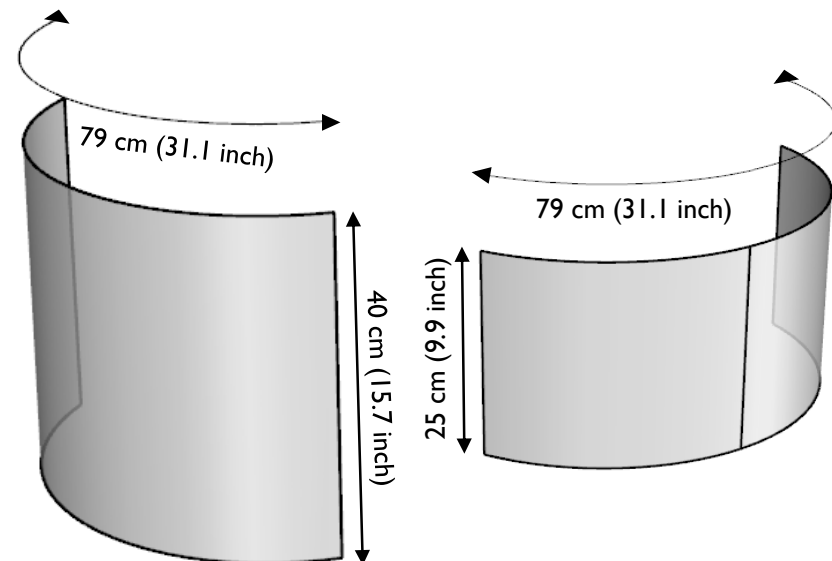
DELFT UNIVERSITY OF TECHNOLOGY

MATERIALS:

- ❑ a clean barrel
- ❑ a paint barrel
- ❑ 915 cm (360 inch) of iron rod
- ❑ a piece of grid with dimensions: 90 cm x 22.5 cm (35.5 inch x 8.9 inch)
- ❑ 40 cm (15.8 inch) of a square metal bar for the legs of the stove (5 cm high (2 inch))

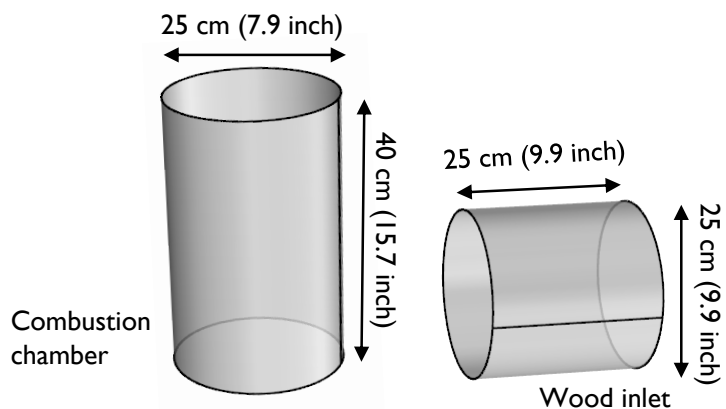
Step 1

Cut 2 pieces out of the clean barrel with these dimensions:



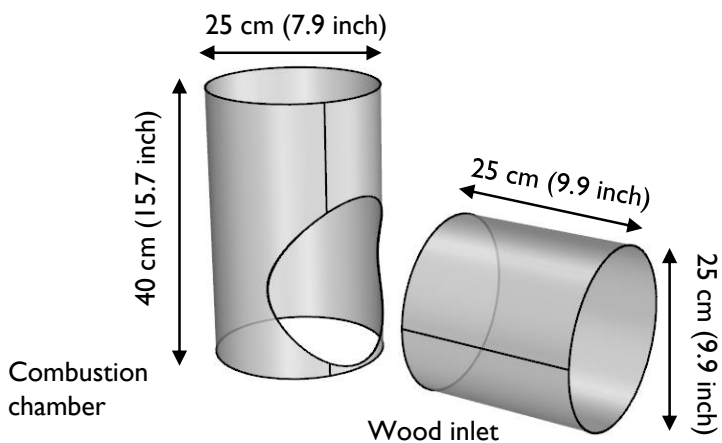
Step 2

Make cylinders of these metal sheets and weld them:



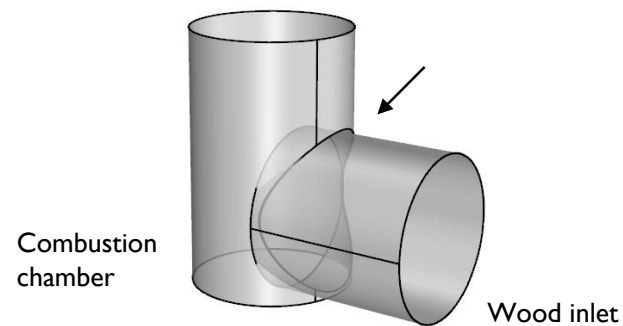
Step 3

Cut a hole in the largest cylinder (the combustion chamber), so that the smaller one fits in (the wood inlet):



Step 4

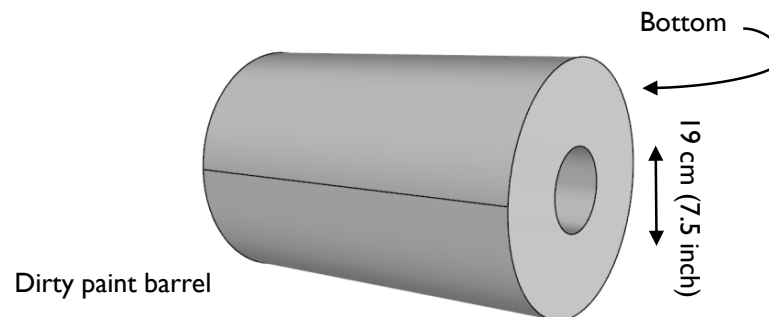
Weld the combustion chamber and the wood inlet together:



THE COMBUSTION CHAMBER AND WOOD INLET
ARE FINISHED NOW

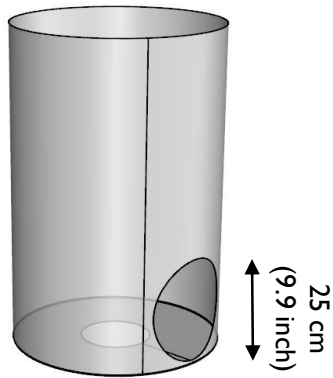
Step 5

Cut a hole in the bottom of the dirty paint barrel. The hole should be smaller than the combustion chamber:



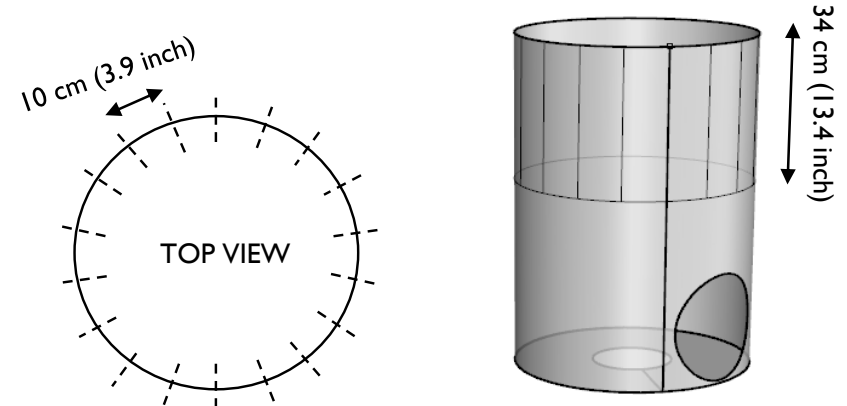
Step 6

Cut a hole in the side of the barrel and check if the wood inlet fits in:



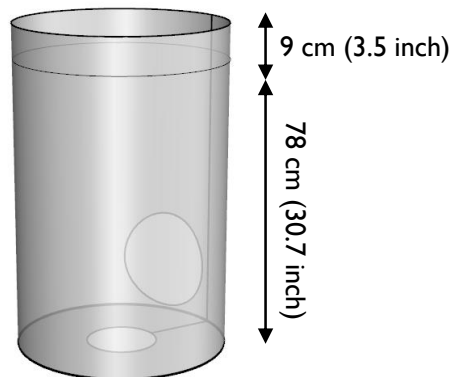
Step 8

Make 18 cuts of 34 cm (13.4 inch) deep in the barrel with a distance of 10 cm (3.9 inch):



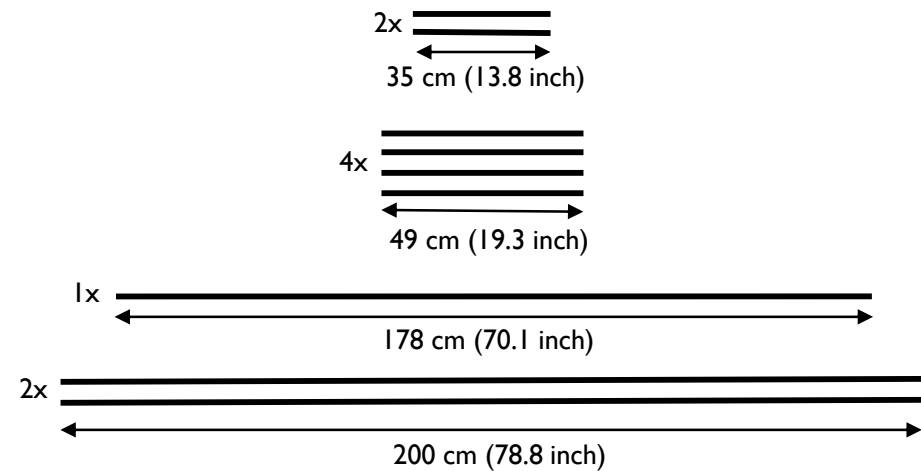
Step 7

Cut 9 cm (3.5 inch) of the top of the barrel. The height of the barrel is now going to be 78 cm (30.7 inch):



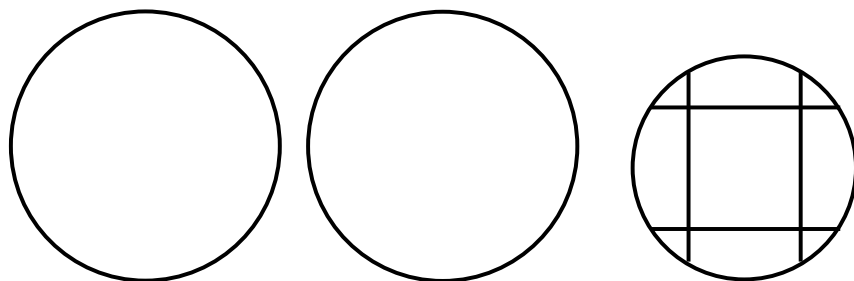
Step 9

Cut 9 pieces of iron rod:



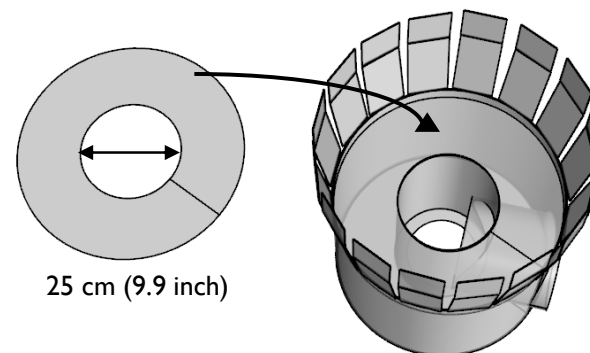
Step 10

Make 3 rings out of the 3 largest rods. Take the smallest ring and make a grid with the four smallest rods in the smallest ring. Make sure the smallest ring fits in the cookstove:



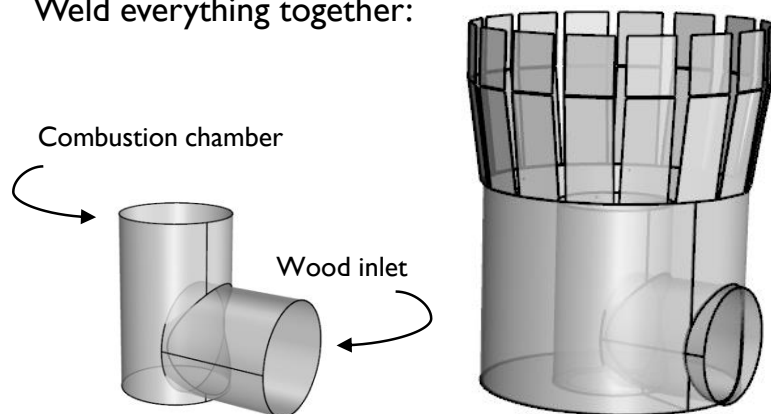
Step 12

Cut a hole in the top of the barrel with the same size as the combustion chamber. Use the top of the barrel to cover the space for insulation material.



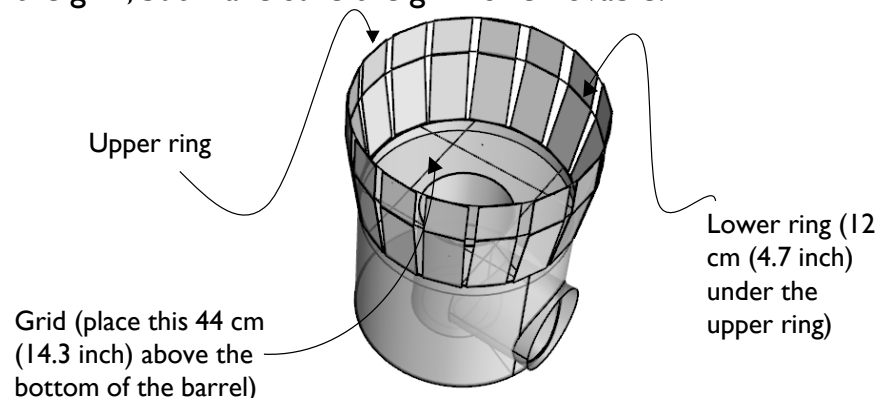
Step 11

Place the combustion chamber inside the large barrel on top of the hole in the bottom of the barrel. Weld everything together:



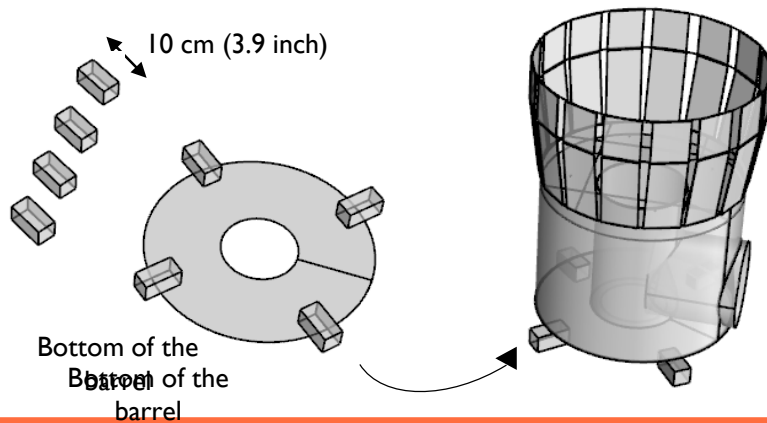
Step 13

Place the rings in the barrel, bend the flaps a bit, so that the rings fit in and weld everything together. Then place the grid, but make sure the grid is removable.



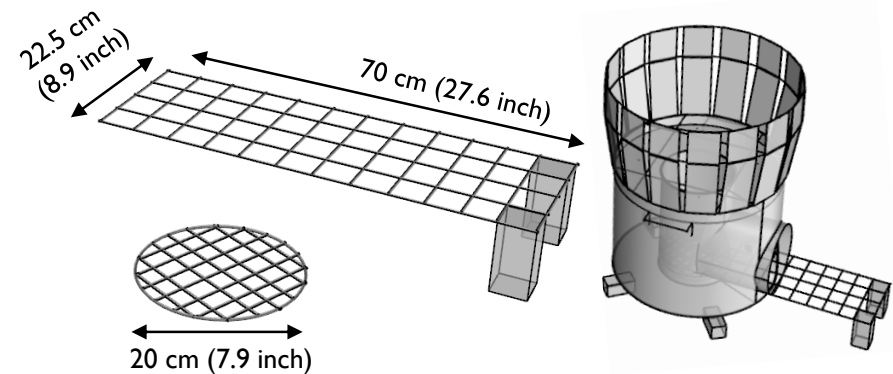
Step 14

Collect 4 pieces of 10 cm (3.9 inch) of the metal bar (5 cm high). And place them under the barrel:



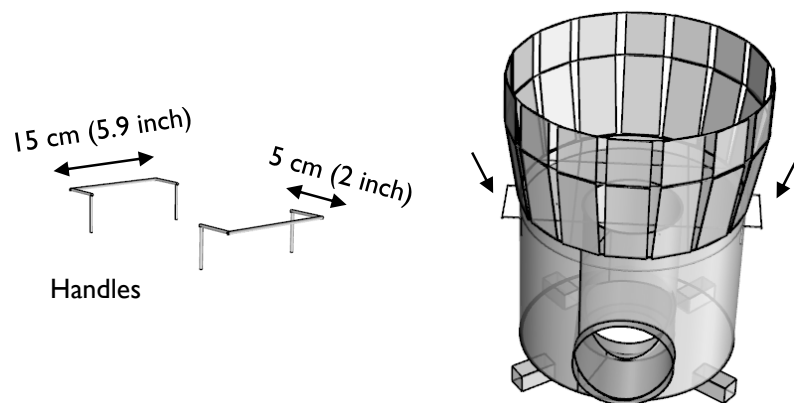
Step 16

Cut 2 grids. Place the rectangular grid in the wood inlet (and support the end of the grid with something) and the round grid in the combustion chamber.



Step 15

Make 2 handles out of the pieces of iron rod. Place the handles on both sides of the cookstove:



Step 17

Place the insulation material in the barrel and cover it with the cover made in step 12. The cookstove is now ready to use!

